

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1, 2, 5-7, 11-12, and 14 in accordance with the following:

1. (CURRENTLY AMENDED) A computer-aided manufacturing (CAM) system, comprising:

a numerical control (NC) apparatus for ~~machining~~ cutting a work according to NC data, the work being which is an object before cutting~~machining~~ according to NC data;

a cutting margin model generator that obtains a computer-aided design (CAD) model that is solid model data of a metal mold to be made and a measured work geometric model that is geometric model data of said work, wherein said geometric model data which is obtained by measuring said work to be machined cut, and generates a cutting margin model that is a difference between said measured work geometric model and said CAD model; and

an NC data generator that generates NC data causing said NC apparatus to carry out cutting, based on the generated cutting margin model.

2. (CURRENTLY AMENDED) The CAM system as set forth in claim 1, wherein said NC data generator generates NC data to ~~machine~~ cut said work by a predetermined cutting depth at a portion in which said a cutting margin exists in said cutting margin model, and NC data to cause a tool to move without ~~machining~~ cutting at a portion in which any cutting margin does not exist.

3. (PREVIOUSLY PRESENTED) The CAM system as set forth in claim 1, further comprising:

a unit that measures a tool form in a state in which said tool is installed to said NC apparatus, and generates a tool model, and

wherein said NC data generator generates said NC data based on both of said cutting margin model and said tool model.

4. (PREVIOUSLY PRESENTED) The CAM system as set forth in claim 1, further comprising:

a unit that outputs an instruction so as to move a tool in either of a tool axis direction and a Z-axis direction, to said NC apparatus, according to a tool load state informed from said NC apparatus.

5. (CURRENTLY AMENDED) The CAM system as set forth in claim 1, further comprising:

a storing unit that stores data informed from said NC apparatus as monitoring data; and
a unit that displays said measured work geometric model, which is colored based on load data in said monitoring data stored by said storing ~~means~~ unit.

6. (CURRENTLY AMENDED) A computer-aided manufacturing (CAM) program embodied on a medium for causing a computer connected to a numerical control (NC) apparatus ~~for machining~~ to control said NC apparatus to cut a work according to NC data, said program comprising:

obtaining a computer-aided design (CAD) model that is solid model data of a metal mold to be made and a measured work geometric model that is geometric model data of ~~said~~ a work before cutting, wherein said geometric model data which is obtained by measuring said work to be ~~machined~~ cut;

generating a cutting margin model that is a difference between said measured work geometric model and said CAD model; and

generating NC data causing said NC apparatus to carry out cutting, based on the generated cutting margin model.

7. (CURRENTLY AMENDED) The CAM program as set forth in claim 6, wherein said generating NC data comprises generating NC data to ~~machine~~ cut said work by a predetermined cutting depth at a portion in which ~~said~~ a cutting margin exists in said cutting margin model[[;]], and generating NC data to cause a tool to move without ~~machining~~ cutting at a portion in which any cutting margin does not exist.

8. (ORIGINAL) The CAM program as set forth in claim 6, further comprising:

measuring a tool form in a state in which said tool is installed to said NC apparatus, and generating a tool model, and

wherein said generating NC data comprises generating said NC data based on both of said cutting margin model and said tool model.

9. (ORIGINAL) The CAM program as set forth in claim 6, further comprising:
outputting an instruction so as to move a tool in either of a tool axis direction and a Z-axis
direction, to said NC apparatus, according to a tool load state informed from said NC apparatus.

10. (PREVIOUSLY PRESENTED) The CAM program as set forth in claim 6, further
comprising:

storing data informed from said NC apparatus as monitoring data; and
displaying said measured work geometric model, which is colored based on load data in
the stored monitoring data.

11. (CURRENTLY AMENDED) A method for controlling a computer-aided
manufacturing (CAM) system, comprising:

obtaining a computer-aided design (CAD) model that is solid model data of a metal mold
to be made and a measured work geometric model that is geometric model data of said a work
before cutting, wherein said geometric model data which is obtained by measuring said work to
be machined cut;

generating a cutting margin model that is a difference between said measured work
geometric model and said CAD model; and

generating numerical control (NC) data causing an NC apparatus to carry out cutting,
based on the generated cutting margin model.

12. (CURRENTLY AMENDED) The method as set forth in claim 11, wherein said
generating NC data comprises generating NC data to machine cut said work by a predetermined
cutting depth at a portion in which said a cutting margin exists in said cutting margin model[(:)],
and

generating NC data to cause a tool to move without machining cutting at a portion in
which any cutting margin does not exist.

13. (ORIGINAL) The method as set forth in claim 11, further comprising:
measuring a tool form in a state in which said tool is installed to an NC apparatus, and
generating a tool model, and
wherein said generating NC data comprises generating said NC data based on both of
said cutting margin model and said tool model.

14. (CURRENTLY AMENDED) The method as set forth in claim 11, further

comprising:

outputting an instruction so as to move a tool in either of a tool axis direction and a Z-axis direction, to ~~an-~~said NC apparatus, according to a tool load state informed from said NC apparatus.

15. (PREVIOUSLY PRESENTED) The method as set forth in claim 11, further comprising:

storing data informed from an NC apparatus as monitoring data; and
displaying said measured work geometric model, which is colored based on load data in the stored monitoring data.